

Application No. 09/986,544
Amendment filed June 22, 2004
Reply to Office Action dated April 22, 2004

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REMARKS

Claims 1-4 are pending, with claim 1 being in independent form.

At the outset, the Applicants acknowledge with appreciation the Examiner's reconsideration and withdrawal of the claim rejections raised in the prior Action.

In this Office Action, claims 1, 3, and 4 stand rejected for obviousness over U.S. Patent No. 5,382,276 to Hakoun et al. ("Hakoun") in view of U.S. Patents No. 3,880,028 to Frederick, Jr. ("Frederick") and No. 6,418,823 to Taitler. Claim 2 is rejected for obviousness over Hakoun, Frederick, and Taitler, in further view of U.S. Patent No. 5,888,268 to Bando. The Applicants believe the pending claims are allowable over the cited combinations of documents for the following reasons.

In accordance with the MPEP, three criteria must be met to establish a prima facie case of obviousness. First, the cited documents must describe or suggest all of the claim features. Second, there must be some suggestion or motivation, either in the cited documents themselves or in the knowledge generally available to one of ordinary skill in the art, to have combined the teachings of the cited documents. Third, there must have been a reasonable expectation that the documents could have been successfully combined to yield the claimed invention.

The rejections raised in the Action cannot stand at least because no combination of the cited documents describes or suggests all of the claim features. Motivations to combine the cited documents and reasonable expectations of successful combinations would also be absent, but it should be sufficient to point out the absent features.

For example, claim 1 recites, among other things, "a detector connected to the control unit is adapted to detect snap off of the fiber and in response thereto causes the control unit to generate a stop signal to stop the cutting movement, the cutting movement being automatically stopped at a predetermined position of the fiber cutter if no fiber snap off is detected". Accordingly, the recited control unit is adapted to the stop cutting movement of the fiber cutter under two conditions: 1) when the detector has detected a "snap off" of the fiber; or 2) when the cutting movement reaches a predetermined position of the fiber cutter if no fiber "snap off" is detected. None of the cited documents, either alone or combination, discloses or suggests such a control unit.

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The Office acknowledges on page 3 of the Action, in paragraph 4, that neither Hakoun nor Frederick disclose or suggest stopping the cutting movement when a "snap off" of the fiber is detected. Nevertheless, the Office asserts that Taitler discloses the absent feature. In particular, the Office asserts that Taitler describes the absent feature at column 7, lines 49-57, which states:

With respect to FIG. 24, the cutting head starts moving from rest and is accelerated until [sic] it reaches a penetrate velocity at the slice surface area. The cutting head is then accelerated to a final velocity (while cutting), for a high valued performance. The end of cut is established by a suitable sensor, causing a stop of the cutting head and a start of an opposite movement (leaves the cut product).

Based on the above-cited passage, Taitler's sensor 8 and computing means 9 at best address only the second condition for which the recited control unit is adapted to stop the cutting movement of the fiber cutter, and in the Applicants' view, does not even disclose or suggest this condition. For example, even if one were to assume that Taitler discloses or suggests stopping the cutting movement when the movement reaches a predetermined position, the document still does not describe that the cutting movement is automatically stopped at the predetermined position if no "snap off" of the item being cut is detected, as claim 1 recites. In addition, Taitler mentions nothing about detecting the first condition for which the recited control unit is adapted, namely, detecting a "snap off" of the product for which Taitler's arrangement is designed to cut.

The only guidance Taitler provides regarding the functionality of the sensor 8 may be found at column 4, lines 50-55, of the document, which states:

the apparatus is equipped with sensors 8 or other measurement means at different places (most of them not drawn, however the skilled in the art person should know how properly to choose them and to incorporate in the apparatus of the present invention), for alarm, limit switch and performance sensing and measuring.

The Applicants respectively assert that this passage does not describe or suggest a control unit that is adapted to stop the cutting movement of the fiber cutter based on the occurrence of the two conditions recited in claim 1. Accordingly, claim 1 is considerable allowable over the cited combination at least because the combination does not disclose or suggest all of the features recited in the claim.

In addition to the above, the Applicants respectfully assert that one of ordinary skill in the art would not be motivated to combine the cited documents as the Action

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asserts, and even if one had, one would have been more likely to arrive at something that did not work at all or not in the manner claimed by the present application.

In attempting to support its *prima facie* case, the Office asserts that Frederick teaches a detector that is a microphone to detect details of the cutting and to adjust the velocity of the work piece cutting movement. The Office then asserts that it would have been obvious for the skilled artisan to combine the teachings of Frederick with those of Hakoun to provide for better automated cutting. Recognizing that the combination still does not reach the claimed invention, the Office asserts that Taitler describes detecting a completion of the cut to effect a stopping of the cutting movement, and that it would have again been obvious to combine the teachings of Taitler with Hakoun's and Frederick's arrangements to provide for better automated cutting. The Applicants disagree with the Office's position for two reasons.

First, nothing in Frederick suggests the need to modify its detector with the teachings of Taitler to provide for stopping the scoring movement based the output of the detector. Indeed, Frederick discourages such an arrangement by describing that its detector is designed to be active only when the scoring of a piece material, such as glass, is taking place. See col. 4, ll. 23-27. Instead of using the detector to stop the scoring movement, Frederick's cutter head mechanism 15 is raised and lowered by an operator based on a location of the cutter head mechanism 15 in relation to the material 12 being scored. See col. 4, ll. 14-24. Based on the above, it is not clear how incorporating features from Taitler's arrangement would provide for better automated cutting, as the Office contends.

Consequently, the motivation cited by the Office for combining Frederick and Taitler appears to come from the description of the Applicants' invention itself. Such hindsight reconstruction is improper. See, e.g., Sensonics, Inc. v. Aerisonic Corp., 38 U.S.P.Q.2d 1551 (Fed. Cir. 1996); In re Oetiker, 24 U.S.P.Q.2d 1443, 1446 (Fed. Cir. 1992) (reversing an obviousness rejection and stating the "reason, suggestion, or motivation" to combine (or modify) prior art "can not come from the applicant's invention itself. [Citation omitted.]"). Accordingly, claim 1 is believed to be allowable for this reason as well.

Moreover, a person of ordinary skill in the art would have known that the features of Frederick and Taitler cannot be combined without further modification to reach the subject matter defined by claim 1. First, Frederick's arrangement would

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have to be modified to automatically stop the scoring of the material when the cutter head mechanism 15 reached a predetermined position if Frederick's detector did not detect any scoring. It is not clear how one would modify Frederick to achieve this operation, as Frederick only describes that the pressure of the scoring or the speed at which the scorer is moved across the object being scored is adjusted based on the detector output signal. See col. 3, ll. 26-30. Second, Frederick's arrangement would have to be modified to stop the cutting movement when a "snap off", i.e., a sound, is detected. But as discussed above, Frederick's arrangement relies on the detector generating a control signal that is proportional to a detected sound to adjust the pressure and/or speed of the scorer, not to stop the scorer.

In the absence of any suggestion in the cited documents of how to make such a combination operable, one would have faced a serious engineering problem that naturally would have had a low probability of success without substantial experimentation and effort, especially in view of the need to modify the teachings of the documents.

Accordingly, claim 1 and its dependent claims are believed to be allowable for at least the foregoing reasons.

It is thus believed this application is in condition for allowance and an early Notice thereof is earnestly solicited. If any questions remain, the Examiner is invited to phone the undersigned at the below-listed number.

Respectfully submitted,

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By:

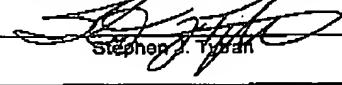

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